

# Notice of Allowability

Application No.

10/690,447

Examiner

Patrick J. Connolly

Applicant(s)

WANG ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09 April 2004.
2. ☒ The allowed claim(s) is/are 1-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 04.09.2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Gregory J. Tooley, Jr.  
Supervisory Patent Examiner

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 1-24 allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer for measuring a surface profile including: a polarizing cube beam splitter for receiving and transmitting an original first light beam to the reflective surface at a first point, and for receiving and reflecting an original second light beam to the reflective surface at a second point such that the original first and second light beams are received at the reflective surface an offset distance apart, and such that the original first and second light beams are reflected back to the first beam splitter where they are split and then recombined into new first and second light beams; and a photodiode for receiving the new second light beam, the new second light beam being constructed by the interference of the half intensity of the original first and the half intensity of the original second light beams, and the photodiode generating signals in response to the changing interference fringes caused as a result of the modulation of the optical path length difference between the original first and second beams so that a local height difference on the reflective surface between the first and second surface points may be determined, in combination with the rest of the limitations of claim 1.

As to claim 10, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method for detecting flatness in a reflective surface including: directing the second beam to the polarizing cube beam splitter, the polarizing cube beam splitter receiving and reflecting the second light beam to the reflective surface at a second point such that the first and

second light beams are received at the reflective surface an offset distance apart; and directing the new second beam to a photodiode, the new second light beam being constructed by the interference of the half intensity of the first beam and the half intensity of the second beam, and the photodiode generating signals in response to the changing interference fringes caused as a result of the modulation of the optical path length difference between the first and second Light beams so that a local height difference on the reflective surface between the first and second surface points may be determined, in combination with the rest of the limitations of claim 10.

As to claim 19, the prior art of record, taken alone or in combination, fails to disclose or render obvious a method for detecting surface flatness including: directing a first light beam onto the magnetic disc surface at a first point; directing a second light beam onto the magnetic recording disc surface at a second point, the horizontal distance between the first point and the second point being defined by a distance "d" adjusting the distance "d" by adjusting the pathway for the first light beam; reflecting the first and second light beams to an intensity beam splitter, the first and second light beams intersecting at the intensity beam splitter and forming new first and second light beams; directing the new second light beam to a photodiode, the new second light beam being constructed by the interference of half intensity of the first beam and half intensity of the second beam, and the photodiode generating signals in response to changing interference fringes caused as a result of the modulation of the optical path length difference between the first and second Light beams so that a local height difference on the reflective surface between the first and second surface points may be determined, in combination with the rest of the limitations of claim 19.

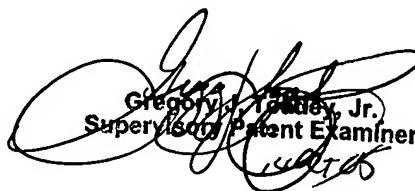
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Connolly whose telephone number is 571.272.2412. The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on 571.272.2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjc/PJC  
10.13.2005

  
Gregory J. Toatley, Jr.  
Supervisor/Patent Examiner